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(54) CHARGED BEAM DRAWING DEVICE

(57) Abstract:

PURPOSE: To reduce coulomb effect to form a fine charged beam image by a high electric current, by dividing a charged beam, emitted from an electron gun, into plural charged beam groups. CONSTITUTION: An electron, emitted from the crossover 11 of an electron gun, becomes a parallel beam by the action of an irradiation lens 14 to be incident into an Einzel lens 15 constituting a multi-charged beam optical system. The lens 15 has plural circular openings arranged in a matrix state, to divide an incident electron beam into plural electron beams. Consequently, the electric current values of the respective electron beam are made small to reduce Coulomb effect and the fading of the electron beam, The electron beam, passed the lens 15, passes a blanking aperture 17 to receive imaging action by an Einzel lens 19, and acceleration action by a rear stage acceleration electrode 20. Then, the electron beam passes an atmospheric takeout part 21 to form the image of the original crossover 11 onto a specimen 22 such as a wafer or a mask.

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